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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/564,445
Filing Date: August 17, 2006
Appellant(s): NEMOTO ET AL.

Mr. Sadao Kinashi
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 10, 2011 appealing from the Office action mailed December 11, 2009, followed by an advisory action mailed July 16, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 2, 5-6 and 9-19.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS."

WITHDRAWN REJECTIONS

The rejection of claim 15 under 112 first paragraph.

The rejection of claim 15 under 112 second paragraph based on "a conveying media between two circular paths."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

US 2002/0088767 A1	Saito et al.	07-2002
US 6,152,723	Winter et al.	11-2000
US 4,312,437	Suzuki et al.	01-1982
US 2002/009126	Choinski	07-2002
US 6,514,448	Vogel et al.	02-2003

US 6,422,379 Zoppas 07-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Amended claim 15 also recites "the second path of the holding mechanism substantially overlaps with the first path of the molding die by making a circular path concentric with the circular path traced by the molding die." It is not at all clear how two concentric circles can overlap or intersect.

Claim Rejections - 35 USC § 102

Claims 2, 5-6, 10 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (US 2002/0088767 A1), henceforth **Saito**.

Regarding **claim 2**, Saito teaches moving a molding die (figure 9:32) along a first path (figure 9, rightmost arc) and moving a holding mechanism (figure 9:23-24) along a second path (figure 9, path swept by holding mechanism as wheel rotates clockwise). The movements are synchronized (figure 7:arrows in 20 and 30) so that the paths substantially overlap where the molding die and the holding mechanism meet (figure 9

position M). That place of overlap is designated "following area;" the holding mechanism carries the drop to that place and transfers the drop (figure 9:18) there to the mold.

Regarding **claim 5**, Saito teaches, during the transferring step, the holding mechanism forcibly inserting the drop (throwing, 0125: last line) into the concavity (figure 11:43) of the female die (figure 9:32).

Regarding **claim 6**, Saito teaches plural holding mechanisms (figure 9:23-24) and plural male and female dies (0109). Saito teaches that both paths are rotary and circular (figure 7:arrows in 20 and 30).

Regarding **claim 10**, Saito teaches that when the holding mechanism approaches the rotating die, the holding mechanism tilts at a specific angle to the radial direction of the turret (0105: middle). The radial direction of the turret is normal to the tangent of circular path of the holding mechanism. If the holding mechanism is tilted to the normal of the circle's radius, then the holding mechanism is also necessarily tilted with respect to the tangent.

Regarding **claim 19**, Saito teaches molding a preform (0015).

Claim Rejections - 35 USC § 103

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** as applied to claim 2 above, and further in view of Winter et al. (US 6,152,723), henceforth **Winter**.

Regarding **claim 9**, Saito teaches that both paths are circular (figure 7:arrows in 20 and 30). Saito does not teach that the holding mechanism's path has a variable radius. Winter teaches a holding mechanism (figure 7:45) that moves along a path with a variable radius (figure 7: bottom of circle). That variation is allowed so that the holding mechanism can reach down and pick up the drop (figure 7:1) before deposit it at its destination (figure 7:4). Therefore, it would have been obvious to one of ordinary skill in the art to allow Saito's holding mechanism a path of variable radius in order to give it the flexibility to move meet other devices in order to perform other steps of the method, of which picking up the drop as Winter teaches is just one example. Alternatively, it would have been obvious to one of ordinary skill in the art to give Saito's holding mechanism a path of variable radius in order to achieve predictable results (flexibility of movement) with a reasonable expectation of success.

Regarding **claim 11**, Saito does not teach a guide or a cam. However, Winter teaches a holding mechanism (figure 7:45) that moves along a guide (figure 7: rail). The holding mechanism has a cam follower (figure 7:54) that follows a cam (figure 7:55). Therefore it would have been obvious to one of ordinary skill in the art to combine Winter's use of guide, cam and cam follower with the steps taught by Saito to achieve predictable results with a reasonable expectation of success. The placement of the cam outside or inside the drop supply is an obvious matter of engineering design choice and does not impart patentable distinction to the claim.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** in view of **Winter** as applied to claim 11 above, and further in view of Suzuki et al. (US 4,312,437), henceforth **Suzuki**.

Regarding **claim 12**, Saito does not teach oscillation. However, Suzuki teaches using oscillation to help release the work from the machine (6:6-9). Therefore, it would have been obvious to one of ordinary skill in the art to have Saito's mechanism oscillate as it approaches the die because Suzuki teaches using oscillation to help release the work. *Alternatively*, it would have been obvious to one of ordinary skill in the art to combine Suzuki's oscillation with the steps taught by Saito in order to achieve predictable results with a reasonable expectation of success.

Claim 13/11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** in view of **Winter** as applied to claim 11 above, and further in view of **Choinski** (US 2002/0093126 A1).

Regarding **claims 13/11,** Saito teaches that the holding mechanism abuts the die (figure 9:M) . Winter teaches that the cam follower (figure 7:54) abuts the cam (figure 7:55).

Saito does not teach a support. However, Choinski teaches supporting a holding mechanism with a support (figure 12:71-73). The support moves inward and outward (figures 12-14) along a guide (figure 12:74). As the support moves, the angle between the guide and the support is adjusted (figures 12-14). The holding mechanism does not move outward from the center of rotation (figure 11). Therefore it would have been

obvious to one of ordinary skill in the art to combine these functional features taught by Choinski with the steps taught by Saito in order to achieve predictable results with a reasonable expectation of success.

Claim 13/12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** in view of **Winter** and **Suzuki** as applied to claim 12 above, and further in view of **Choinski**.

Regarding **claims 13/12,** Saito teaches that the holding mechanism abuts the die (figure 9:M) . Winter teaches that the cam follower (figure 7:54) abuts the cam (figure 7:55).

Saito does not teach a support. However, Choinski teaches supporting a holding mechanism with a support (figure 12:71-73). The support moves inward and outward (figures 12-14) along a guide (figure 12:74). As the support moves, the angle between the guide and the support is adjusted (figures 12-14). The holding mechanism does not move outward from the center of rotation (figure 11). Therefore it would have been obvious to one of ordinary skill in the art to combine these functional features taught by Choinski with the steps taught by Saito in order to achieve predictable results with a reasonable expectation of success.

Choinski's support is not biased outward from a wheel to which the holding mechanism attached. However, Saito's holding mechanism (figure 9:23-24) faces outward from the wheel to which it is attached. Therefore it would have been obvious to one of ordinary skill in the art to conserve the orientation of Saito's holding mechanism

by having the added support face outward from the wheel as well. *Alternatively*, there are a finite number of options for orienting the support: inward or outward. Therefore, given that finite number of options, it would have been obvious to one of ordinary skill in the art to try orienting the support outward.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** as applied to claim 2 above, and further in view of Vogel et al. (US 6,514,448 B1), henceforth **Vogel**.

Regarding **claim 14**, Saito does not teach a fixing member or a controlling guide. Vogel teaches a holding mechanism (figure 8:19) is supported by a fixing member (figure 8:20) which moves in a second path in an eccentric circle. The fixing member's movement is controlled by a controlling guide (figure 8:31-33). The controlling guide is on a cam. Therefore, it would have been obvious to one of ordinary skill in the art to combine these functions taught by Vogel with the steps taught by Saito to achieve predictable results with a reasonable expectation of success.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** in view of **Vogel** as applied to claim 14 above, and further in view of **Zoppas** (US 6,422,379 B1).

Regarding **claim 15**, Saito teaches that each of the molding die and the holding mechanism travels on a circular path. The Saito does not teach radial extension means. However, Zoppas teaches transporting preforms (figure 1:1) using a radial

extension means (figure 3:31) on a conveying media on a wrapping driving device (figure 1:2). Therefore, it would have been obvious to one of ordinary skill in the art to combine the functions taught by Zoppas with the steps taught by Saito in order to achieve predictable results with a reasonable expectation of success.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** in view of **Vogel** as applied to claim 14 above, and further in view of **Winter** and **Choinski**.

Regarding **claim 16**, Saito teaches that the holding mechanism abuts the die (figure 9:M) .

Saito does not teach a cam or a cam follower. However, Winter teaches a cam follower (figure 7:54) that abuts the cam (figure 7:55). Therefore it would have been obvious to one of ordinary skill in the art to combine the use of a cam and cam follower with the steps taught by Saito in order to achieve predictable results with a reasonable expectation of success.

Saito does not teach a support. However, Choinski teaches supporting a holding mechanism with a support (figure 12:71-73). The support is biased or held on with a force toward the outside of a wheel to which the holding mechanism is attached (figure 11). The support moves inward and outward (figures 12-14) along a guide (figure 12:74). As the support moves, the angle between the guide and the support is adjusted (figures 12-14). The holding mechanism does not move outward from the center of rotation (figure 11). Therefore it would have been obvious to one of ordinary skill in the

art to combine these functional features taught by Choinski with the steps taught by Saito in order to achieve predictable results with a reasonable expectation of success.

Regarding **claim 17**, Saito teaches that the path around the eccentric circle is formed by vertical rotation (figure 9; the words "upper" and "descend" indicate that both circles are in the vertical plane).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Saito** as applied to claim 2 above.

Regarding **claim 18**, Saito does not teach adjusting the velocity of the holding mechanism. However, since Saito's method requires the holding mechanism and the die to arrive at the same place at the same time, it would have been obvious to one of ordinary skill in the art to arrange that coincidence by adjusting the velocity of the holding mechanism to that of the molding die.

(10) Response to Argument

The examiner rejected dependent claim 15 under 112 second paragraph on two grounds, the first having to do with two circular paths (Office Action of 12/11/2009 page 3 bottom) and the second having to do with the overlap of concentric circles (Office Action of 12/11/2009 top). Since Appellant has not argued against the rejection based on overlapping concentric circles, the examiners asks that the Board summarily affirm that rejection.

The examiner rejected independent claim 2 under 102 as being anticipated by Saito. Appellant argues that Saito does not teach a "following zone extending in plain view" where the path of the molding die and the path of the holding mechanism "substantially overlap." It appears that Appellant is arguing two things: first, that Saito does not teach a following zone and, second, that Saito does not teach a "substantial overlap." Appellant refers to Saito's figure 9 to show that Saito does not teach a "substantial overlap."

In response to Appellant's argument about "substantial overlap," the examiner asks that the Board compare Saito's figure 9 to Appellant's figure 2. These drawings, which belong to the same assignee, are essentially identical. Having interpreted the phrase "substantial overlap" in light of Appellant's specification, the examiner based her understanding of what counts as "substantial overlap" on what Applicant disclosed. If Appellant's invention, represented in Appellant's figure 2, has "substantial overlap," then how can Saito's invention, represented by the same drawing, not have it?

In response to Appellant's argument about a following zone, again, based on the near identity of Saito's figure 9 to Appellant's figure 2, Saito teaches the same following zone as Appellant. When, in the Office Action mailed December 11, 2009 (page 2), the examiner rejected claim 2 under 112 first paragraph because she did not see in the specification support for the concept of a "following area," Appellant responded in the remarks mailed June 10, 2010 (page 9) by indicating the "following zone" in figure 4, which Appellant has reproduced on page 8 of the Appeal Brief. Appellant's indication of figure 4 as the description of the following zone suggests that the following zone is

nothing more than an area surrounding the intersection between the paths of the molding die and the path of the holding mechanism. Claim 2's definition of the following zone as the place "where the first path and the second path substantially overlap" only reinforces this interpretation. Therefore, all that is necessary for there to be a following zone is the overlap of the two paths, which Saito clearly teaches.

Finally, Appellant argues that synchronizing the movements of the holding mechanism and the molding die in the following zone. In response to Appellant's argument, Saito's figure 7 shows arrows of revolution in the cutting/feeding mechanism (20), which holds the holding mechanism, and the rotary turret (31), which holds the molding die. These arrows indicate synchronized motion.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Magali P. Slawski/

Examiner, Art Unit 1728

Conferees:

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/Anthony McFarlane/